

cont. B1
cont. A1

(52.) The transportable module of claim 34 wherein the frame structure is horizontally elongated.

53. The modular structure of claim 41 wherein the plurality of modules are each horizontally elongated.

REMARKS

Reconsideration of the present application is respectfully requested. Claims 1-43 were pending at the time of the action. Claims 44-53 are new. The office action summary states that claims 1-43 stand rejected. However, the detailed action only applies the references to reject claims 1-19 and 30-41. Claims 20-29, 42 and 43 had no references applied to reject them nor is any other valid basis given to reject the claims. Accordingly, they should have been allowed. In view of the following it is respectfully submitted that each of the claims are allowable over the art of record, and a prompt notice of allowance for all claims is earnestly solicited.

Claims 1-4, 15, 30, 32-37, and 41 stand rejected under 35 U.S.C. §102(b) as being anticipated by Yerushalmi. In order to establish anticipation, each element of the claim must be either expressly or inherently present in a single reference. To establish inherency, the evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill in the art." MPEP §2112, quoting In re Robertson, 49 USPQ2d 1949, 1950-51 (Fed Cir. 1999). In other words, it must be shown that the "allegedly inherent characteristic necessarily flows from the

teachings of the applied prior art.” MPEP §2112, quoting Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). Yerushalmi fails to expressly or inherently disclose numerous elements of the rejected claims and thus the rejections are improper and should be withdrawn.

Yerushalmi is directed to a blast and fragment resistant protective structure. Yerushalmi is not concerned with shielding those outside the structure from radiation inside the structure because shielding blast fragments is different from shielding radiation. In fact Yerushalmi cites as an advantage its ability to “be built of considerably smaller thickness than the conventional reinforced-concrete protective walls.” (Col. 1, lines 59-61; col. 3, lines 42-43, citing wall structure thickness of about 25 cm). Claim 1 by contrast recites a radiation shielding structure having a central treatment area adapted for human occupation and to contain a therapeutic radiation source, and claim 1 requires a quantity of radiation shielding filler material “*sufficient to substantially reduce* the measurable radiation level outside the central treatment area when a radiation source is placed in the central treatment area.” Being directed to blast and fragment resistant structures, Yerushalmi fails to expressly teach the claimed quantity of radiation shielding filler material, and the action does not demonstrate that the claimed quantity necessarily flows from the teachings of the reference.

Further, Yerushalmi teaches assembly of the blast resistant structure by connecting a series of face panels 2, 4 and diagonal panels 6 and pouring concrete in-between the panels 2, 4. In a radiation shielding situation, these diagonal panels 6 could constitute a conduit into which neutrons would flow, further suggesting the unsuitability for effective radiation shielding. Moreover, claim 1 requires “a plurality of free standing transportable modules ... the modules comprising a support frame structure and at least one wall.” The action apparently contends that

the face panels 2, 4 are both the modules and the walls of the modules, with the diagonal panels 6 providing the support frame structure. However, the face panels 2, 4 are merely panels, not free standing transportable modules, and the face panels 2, 4 cannot be the claimed modules and also "comprise" the diagonal panels 6 ("support frame structure") and the face panels 2, 4 ("wall"). Accordingly, Yerushalmi's panel-by-panel construction of a blast resistant structure fails to adequately disclose the plurality of free standing transportable modules connected to form a central treatment area and a barrier surrounding the central treatment area of claim 1.

Withdrawal of the rejection is respectfully requested.

Aside from the patentability of the base claim, additional reasons support the patentability of the rejected dependent claims of claim 1. For example, channels 23, 63 (FIG. 6 of Yerushalmi) are not in fluid communication such that radiation shielding filler material provided into one channel can flow into the adjacent channel. (claim 4) In Yerushalmi, the concrete poured into the wall communicates throughout the wall via the openings 64 in the main panel section 61 of the diagonal panels 6. (col. 3, lines 6-8, FIG. 5) As shown in FIG. 5, the openings 64 do not extend to the double bend 63 of the diagonal panel 6. Thus the channel formed by this double bend 63 (FIG. 6) it is not in fluid communication with channel 23 such that radiation shielding filler material could flow between the channels as is stated in the action.

With respect to independent claim 30, Yerushalmi fails to teach a plurality of free standing modules each comprising a support frame and at least two spaced apart rigid walls defining a channel between the walls. The panels 2, 4, cannot be both the modules and the spaced apart rigid walls of the modules. Further, Yerushalmi does not teach any particular type of ceiling or roof, let alone a second plurality of free standing modules at least one of which comprises a reinforced floor portion, the second plurality of modules adapted to be placed on top

of and connected to the first plurality of modules with the reinforced floor portions above and substantially covering a central treatment area as claimed. Finally, Yerushalmi does not teach that the second plurality of modules have portions that would be aligned over and in fluid communication with a barrier zone such that radiation filler material provided into the second plurality of modules could flow into the barrier zone.

With respect to independent claim 34, Yerushalmi does not teach a transportable module for forming a structure wherein the module is capable of being lifted by its ends by a standard container mover without substantial deflection to facilitate construction of a structure comprising a plurality of modules, the module comprising, among other things, a free standing transportable frame structure, a pair of spaced apart reinforced rigid walls mounted to the frame structure, rigid supports mounted in the channel space between the walls wherein a substantial portion of the channel space does not contain a ceiling or a floor.

Independent claim 41 recites a plurality of transportable modules connected to form a central treatment area and a barrier substantially surrounding the central treatment area and at least one of the modules comprising a portion of the central treatment area and including a support frame for holding a piece of radiation equipment in the central treatment area.

Yerushalmi does not disclose a support frame for holding a piece of radiation equipment, nor does it disclose holding the radiation equipment in a central treatment area formed by connecting a plurality of transportable modules.

Claims 5-19, 31, 38-40 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yerushalmi in view of Dow and Zoback. These rejections are also traversed.

Independent claim 38 recites a door and a *retractable* threshold adjacent the door, wherein the door and the retractable threshold each comprise *radiation shielding material*.

Claim 38 also recites a *lifting mechanism* for raising and lowering the threshold and that the threshold *blocks radiation leakage under the door* when the door is closed. Acknowledging that neither Yerushalmi nor Zoback expressly disclose these elements, the action appears to suggest that Zoback inherently teaches all the elements of claim 38. In particular the action contends that Zoback teaches “a door 20 having an inherent tractable threshold on its own weight and a panic hardware 21 installed thereon to permit quick exit from building.” (Action p. 3) While it is unclear what the action means by a *tractable* threshold, a *retractable threshold* as claimed is not inherent in Zoback. Zoback’s appears to be a standard door, and the panic hardware 21 appears to be a push bar that operates the door latch mechanism (not shown). Similar doors commonly do not have retractable thresholds and the action fails to provide any explanation as to why Zoback’s door necessarily has a retractable threshold and lifting mechanism as claimed.

Furthermore, Zoback is directed to a secondary containment structure for hazardous materials, not to a radiation shielding structure. The containment of hazardous materials does not necessarily require radiation shielding material. Accordingly, there is no teaching or suggestion that Zoback’s door 20 or any associated threshold comprise radiation shielding material or that the associated threshold blocks radiation leakage under the door when the door is closed. Accordingly, it is not seen how Zoback alone or in combination with Yerushalmi teaches all the elements of claims 38 or of its dependent claims 39-40. Clarification or withdrawal of the rejections is requested.

Besides claims 38-40, the remainder of the rejections under §103 are of claims which depend either directly or indirectly from those discussed above with respect to the anticipation rejections. Accordingly, at least because the base claims are patentable, the dependent claims are also patentable.

Furthermore, to the extent the proposed combination of Dow with Yerushalmi is understood, the combination is improper. Dow is directed to a building technique utilizing *precast* concrete panels 14 and a *precast* concrete roof slab 50. By contrast, Yerushalmi describes *pouring* concrete between its face panels 2, 4 to build its blast resistant walls. “[T]o modify Yerushalmi’s radiation shielding filler material with Dow’s for roof and door,” as is suggested in the action, would destroy the operability of Yerushalmi. The blast resistant walls of Yerushalmi could not be constructed with the precast concrete panels of Dow because precast concrete could not be poured between the face panels 2, 4 of Yerushalmi. Further, it is not clear how Yerushalmi’s walls would be adapted to accommodate the precast concrete roof slab 50 of Dow. Finally, those of skill in the art know that precast concrete is not acceptable for most radiation shielding needs because the resulting gaps between abutting precast concrete sections typically allow large quantities of radiation to escape.

Moreover, even assuming *arguendo* the combination of Dow into Yerushalmi were proper, it still fails to cure the deficiencies in Yerushalmi or to teach all limitations of the claims as required. Neither the side panels 14 nor the roof slab 50 of Dow are free standing transportable modules, and thus the roof slab 50 is not a second plurality of free standing modules forming a roof over a central treatment area. (claim 5) Further, being precast concrete, the roof slab 50 lacks a rigid floor supporting a quantity of radiation shielding filler material above a central treatment area wherein radiation shielding filler material provided into the roof barrier can flow into the barrier. (claim 8).

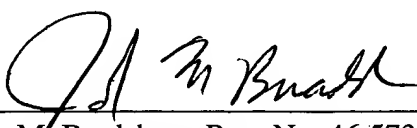
Additional limitations not taught by Yerushalmi and not cured by the addition of a roof and door from Dow include: portions of modules outside the central treatment area and the barrier adapted to form rooms suitable for human occupation (claim 10), the outside area

comprising at least one wall and a floor (claim 11); a steel base frame for supporting a medical treatment device (claim 17); at least one module comprising a door providing access to the central treatment area, the door comprising radiation shielding material (claim 18); and radiation shielding panels between at least two of the modules (claim 19).

Finally, the action again rejects claims 38-40 under 35 U.S.C. §103(a) as being unpatentable over Yerushalmi in view of Dow and Zoback, but cites as the rationale that they are considered to be "the obvious method of setting up the device of claims 1-37." (Action p. 4) This appears to be a mistake because claims 38-40 are apparatus claims and claims 20-29 are method claims. Moreover, as detailed above, each of the apparatus claims are patentable over the art of record, negating the basis cited in the action for rejecting the "method" claims.

Reconsideration of the present application is respectfully requested. Claims 44-53 have been added to recite additional inventions of the present application and are also allowable over the art of record. For at least the foregoing reasons, all pending claims 1-53 are in condition for allowance and a prompt notice of allowance is respectfully requested. The Examiner is invited to contact the undersigned by telephone to discuss any matter that would further prosecution of the present case.

Respectfully submitted,

By 
John M. Bradshaw, Reg. No. 46,573
Woodard, Emhardt, Naughton,
Moriarty & McNett LLP
Bank One Center/Tower
111 Monument Circle, Suite 3700
Indianapolis, Indiana 46204-5137
(317) 634-3456

VERSION WITH MARKINGS TO SHOW CHANGES MADE

Claims 44-53 have been added as follows:

44. The modular structure of claim 1 wherein the plurality of modules are each horizontally elongated.

45. The modular structure of claim 1 further comprising medical equipment inside the treatment area, wherein the medical equipment is adapted to therapeutically treat a patient with radiation and the barrier is effective to substantially reduce the measurable radiation level outside the central treatment area when the patient is being therapeutically treated with the radiation inside the treatment area.

46. The modular structure of claim 45 wherein the medical equipment is mounted on a portion of one of the modules that is separately removable from the treatment area to allow withdrawal and replacement of the medical equipment without substantial disturbance of the portion of the barrier that is spaced from the separately removable portion of the module.

47. The modular structure of claim 45 wherein the radiation shielding filler material surrounds a substantial portion of the central treatment area as a continuous fill between the first and second spaced apart walls.

48. A structure for housing a therapeutic radiation source comprising:
a plurality of free standing transportable modules connected to form a central medical treatment area,
a barrier of radiation shielding material substantially surrounding the treatment area; and
medical equipment in the central treatment area adapted to therapeutically treat a patient with radiation wherein the barrier is effective to substantially reduce the measurable radiation level outside the central treatment area when the patient is being therapeutically treated with the radiation inside the treatment area;

wherein the medical equipment is mounted on a portion of one of the modules that is separately removable from the treatment area to allow withdrawal and replacement of the medical equipment without substantial disturbance of the portion of the barrier that is spaced from the portion of the module that is separately removable.

49. The structure of claim 48 further comprising:
a radiation shielding door granting access to the central treatment area and a radiation shielding retractable threshold adjacent the door; and
a lifting mechanism for selectively raising and lowering the threshold.

50. The structure of claim 48 wherein the plurality of modules are each horizontally elongated.

51. The apparatus of claim 30 wherein the major axis of the of the plurality of modules is substantially horizontal when the modules are connected to each other to form a barrier zone substantially surrounding a central treatment area.

52. The transportable module of claim 34 wherein the frame structure is horizontally elongated.

53. The modular structure of claim 41 wherein the plurality of modules are each horizontally elongated.